<u>Amendments to the Claims</u>:

This listing of claims will replace all prior versions, and listings, of claims in the application.

<u>Listing of Claims</u>:

1. (**Currently Amended**) A method for operating a network coupling adapter attaching one or more computing device via an associated interconnected memory to either one of an I/O periphery, a network, or other computing devices, characterized by the steps of:

operating a local memory being associated with the network coupling adapter ~~as a cache memory~~ for storing transmission control information;

<u>operating</u> ~~associated with information stored in~~ a system memory of the one or more computing device~~, such that transmission control information is cached in the local memory and~~ <u>for storing</u> information other than transmission control information<u>, such that the information</u> ~~is~~ stored in the system memory <u>is associated with the transmission control information stored in the local memory; and</u>

<u>wherein said step of operating a local memory comprises:</u>

<u>determining if there is room in the local memory for storing the transmission control information;</u>

<u>if there is not sufficient room in the local memory for storing the transmission control information, moving the transmission control information</u>

- 2 -

stored in the local memory to the system memory and maintaining the association

with the information other than transmission control information previously

stored in the system memory; and

storing the transmission control information in the local memory.

2. **(Original)** The method according to claim 1 further comprising the steps of

using an InfiniBand Architecture.

3. **(Original)** The method according to the claim 1 further comprising the steps of

using said transmission control for the processing of queues or queue pairs.

4. **(Original)** The method according to claim 2 further comprising the steps of

using said transmission control for the processing of completion queues.

5. **(Original)** The method according to claim 2 further comprising the steps of

using said transmission control for the processing of address translation and protection

tables.

6. **(Original)** The method according to claim 2 further comprising the steps of

using said local memory for connecting at least one computer device to a network.

7. **(Original)** The method according to claim 2 further comprising the steps of

using said transmission control information for bundled per queue or queue pair.

8. **(Original)** The method according to claim 2 further comprising the steps of

configuring said cache memory not to discard transmission control information for

particular queues after casting-out.

- 3 -

Atty. Docket No. DE920000090US1
(590.160)

9. **(Original)** The method according to claim 2 further comprising the step of writing said transmission control information to the local memory only before signaling the completion of a InfiniBand verb.

10. **(Original)** The method according to claim 2 further comprising the steps of using said previous step for connecting a plurality of I/O hardware devices associated with a computing device.

11. **(Original)** The method according to claim 2 further comprising the steps of using said previous step for providing communication channels for interprocess communication between a plurality of processes associated with one or more computing devices.

12. **(Currently Amended)** A network coupling element coupling one or more computing devices via an associated interconnected memory to either one of an I/O periphery, a network, or other computing devices characterized by hardware and comprising:

a local memory associated with the network coupling element being operable as a cache memory, such that transmission control information associated with information stored in said interconnected memory of the computing device is cached in the local memory and information other than transmission control information is stored in the interconnected memory;

wherein operating the local memory as a cache comprises:

- 4 -

determining if there is room in the local memory for storing the

transmission control information;

if there is not sufficient room in the local memory, moving the

transmission control information stored in the local memory to the interconnected

memory and maintaining the association with the information other than

transmission control information previously stored in the interconnected memory;

and,

storing the transmission control information in the local memory.

13. **(Currently Amended)** ~~The~~ A network coupling element for coupling one or

more computing devices via an associated interconnected memory to an I/O periphery,

and operates either as a Host Channel Adapter or a Target Channel Adapter being

operable according ~~the~~ to InfiniBand Architecture is characterized by hardware and

comprising:

a local memory associated with the network coupling element being operable as a

cache memory, such that transmission control information associated with information

stored in said interconnected memory of the one or more computing devices is cached in

the local memory and information other than transmission control information is stored in

the interconnected memory;

wherein operating the local memory as a cache comprises:

determining if there is room in the local memory for storing the

transmission control information;

if there is not sufficient room in the local memory, moving the

transmission control information stored in the local memory to the interconnected

memory and maintaining the association with the information other than

transmission control information previously stored in the interconnected memory;

and,

storing the transmission control information in the local memory.

- 6 -